



Nortel Metro Ethernet Routing Switch 8600

# Fundamentals — Using Device Manager

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# New in this release

The following sections detail what's new in Nortel Metro Ethernet Routing Switch 8600 Fundamentals — Using Device Manager (NN46225-300).

- "Features" (page 7)
- "Other Changes" (page 7)

#### **Features**

The following features are new in Nortel Metro Ethernet Routing Switch 8600 Fundamentals — Using Device Manager (NN46225-300) for this release:

- Default properties dialog box (see "Setting the Device Manager properties" (page 31))
- Per device properties dialog box (see "Viewing and customizing per device properties" (page 34))
- Option to use the default community strings on open (see "Opening a device" (page 36))
- View the status of a controlled software upgrade (see "Viewing controlled software upgrade status" (page 70))
- QoS menu bar options for the MERS 8600 for configuring QoS color-aware policing; egress traffic management using subport queue set shapers and Weighted Random Early Detection (WRED) thresholds; and Drop Trap profiles (see "Device Manager menu bar descriptions, Metro Ethernet Routing Switch 8600" (page 43))
- VPN menu bar options for the MERS 8600 for configuring Performance Monitoring (PM) profiles and viewing PM connection metrics (see "Device Manager menu bar descriptions, Metro Ethernet Routing Switch 8600" (page 43))

## Other Changes

There are no other changes to this document for this release.

## Introduction

Device Manager is a graphical user interface (GUI) used to configure and manage switches in the Optical Ethernet Switching Solutions portfolio. This includes the Metro Ethernet Routing Switch 8600, the Metro Ethernet Services Unit (ESU) 1800, and the Metro Ethernet Services Unit (ESU) 1850. You install Device Manager on a management station in the network.

This guide describes:

- How to install and start the Device Manager software on a Windows or UNIX platform.
- How to use the Device Manager to manage your Metro Ethernet Routing Switch 8600, ESU 1800, and ESU 1850.
- How to identify and resolve some common operational problems that can occur when managing your device.

#### Before you begin

This guide is intended for network administrators with the following background:

- Basic knowledge of networks, Ethernet bridging, and IP routing
- Familiarity with networking concepts and terminology
- Basic knowledge of network topologies
- Experience with windowing systems or graphical user interfaces (GUIs)

# **Installing Device Manager software**

Java Device Manager (JDM) is an SNMP-based graphical user interface (GUI) tool designed to manage single devices. To use Java Device Manager (also referred to in this manual as Device Manager), you must have network connectivity to a management station running JDM in one of the supported environments.

The Device Manager software is provided on the software CD as a self-extracting executable file. Device Manager is also available from the Nortel web site. This chapter provides instructions for installing the Device Manager software in a Windows or UNIX environment.

The Java Runtime Environment (JRE) is bundled with the Device Manager software and does not require a separate installation.

## **Navigation**

- "JDM installation notes" (page 11)
- "JDM installation warnings" (page 12)
- "Installing Device Manager on Windows" (page 12)
- "Installing Device Manager on UNIX" (page 19)

#### JDM installation notes

The following installation notes apply to both Windows and UNIX:

- If you have other Nortel switches in your network and are running earlier versions of Device Manager software, you must install the newest version of Device Manager to access the switches running the latest software.
- Prior to upgrading Device Manager, either uninstall your previous version of the Device Manager software, or install the new software to a different directory. (You can have multiple versions of Device Manager stored on your PC or UNIX machine, provided that each version is stored in a separate directory).

In a Windows environment, a dm.ini file is created in the JDM install directory to save those IP addresses visited in JDM. In a UNIX environment, a ~/.idm/dm.ini file is created to save those IP addresses visited in JDM. A JDM uninstallation operation does not remove this file. If you wish, you can move or copy these files from a previous version of JDM to a new JDM installation.

#### JDM installation warnings

The following warnings apply to both Windows and UNIX:

- If you have other Nortel switches in your network, and are running earlier versions of JDM software, you must install the newest version of JDM to access the switches running the latest software.
- Prior to upgrading JDM, either uninstall your previous version of the Device Manager software, or install the new software to a different directory. (You can have multiple versions of Device Manager stored on your PC or UNIX machine, provided that each version is stored in a separate directory.)
  - Nortel recommends that you do not install the JDM to a directory where a previous version of Device Manager software already exists.
- In a Windows environment, a dm.ini file is created in the JDM install directory to save IP addresses that are visited in JDM. In a UNIX environment, a ~/.jdm/dm.ini file is created to save those IP addresses visited in JDM. A JDM uninstallation operation does not remove this file. If you wish, you can move or copy these files from a previous version of JDM to a new JDM installation. The contents of the IP addresses visited file are automatically copied from previous existing JDM versions to upgraded installed JDM version when the previous version is uninstalled and the upgraded JDM version is installed in the same directory. The dm.ini file containing IP addresses visited must be manually copied when the upgraded JDM file is installed in a separate directory from the previous version.
- Ensure that the JDM and the switch software versions match. Matching versions correctly display dialog boxes and information and enable accessibility to the software. Please refer to the Ethernet Routing Switch 8600 release notes for correct compatibility.

## **Installing Device Manager on Windows**

This section describes the minimum installation requirements and describes how to install JDM from the CD or the Web.

#### **Navigation**

- "Windows minimum requirements" (page 13)
- "Installing Device Manager on Windows from the CD" (page 13)

"Installing Device Manager on Windows from the Web" (page 18)

#### **Windows minimum requirements**

The minimum system requirements for installing Device Manager on Microsoft Windows 2000, Windows 2003, Windows XP, and Windows Vista are:

- 400 MHz or higher Pentium processor
- 512 MB DRAM
- 400 MB space on hard drive

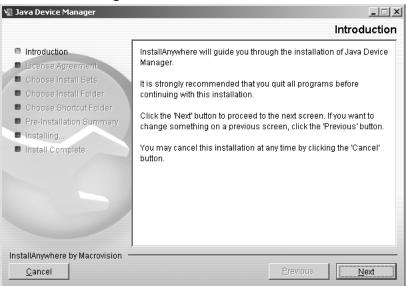
#### Installing Device Manager on Windows from the CD

Use this procedure to install Device Manager on Windows from the CD.

#### **Procedure steps**

Step	Action
1	Close all programs.
2	Insert the software CD into your CD-ROM drive.
3	From the Windows Start menu, choose <b>Run</b> .  The Run dialog box opens.
4	Use Browse to navigate to the drive where the CD-ROM is located.
5	On the CD-ROM drive, locate the \Windows\Device Manager subdirectory.
6	Double-click the jdm_xxxx.exe file.
	An installation screen opens, followed by a Nortel dialog box. Then, the Introduction dialog box appears (see "Introduction dialog box" (page 14)).

#### Introduction dialog box



7 Click Next to continue the installation process.

The License Agreement dialog box opens (see "License Agreement dialog box" (page 14)).

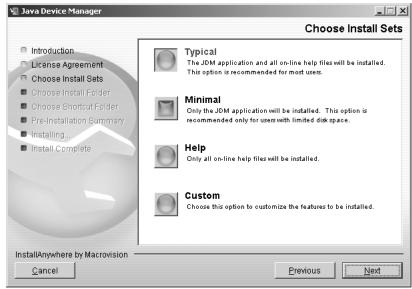
#### License Agreement dialog box



- 8 Click I accept the terms of the license agreement (see "License Agreement dialog box" (page 14)).
- 9 Click Next.

The Choose Install Sets dialog box opens (see "Choose Install Sets dialog box" (page 15)).

#### Choose Install Sets dialog box

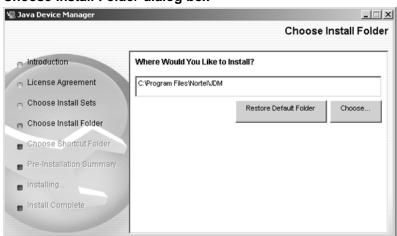


#### 10 Do one of the following:

- Select Typical installation to install the common set features, as well as online Help.
- Select Minimal installation to select minimal features to install (recommended for those with limited disk space).
- Select Help to install only the online Help.
- Select Custom installation to customize the features prior to installation.

#### 11 Click Next.

The Choose Install Folder dialog box opens (see "Choose Install Folder dialog box" (page 16)).



#### Choose Install Folder dialog box

12 Click Restore Default Folder or click Choose to select the storage path.

Previous

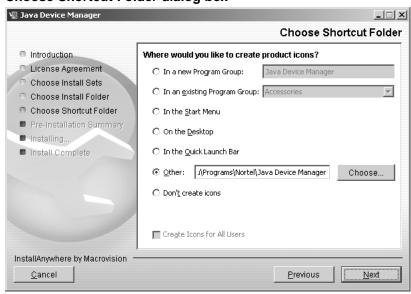
Next

13 Click Next.

Cancel

The Choose Shortcut Folder dialog box opens (see "Choose Shortcut Folder dialog box" (page 16)).

#### Choose Shortcut Folder dialog box



- 14 Select a shortcut path, if desired.
- 15 Click Next.

The Pre-Installation Summary dialog box opens (see "Pre-installation Summary dialog box" (page 17)).

#### Pre-installation Summary dialog box



- Verify the folder, shortcut, and disk space required to install the software. Use the Previous button to return to the appropriate dialog box to make changes.
- 17 Click Install.

The installation process begins (see "Installing Java Device Manager dialog box" (page 17)).

#### Installing Java Device Manager dialog box



When the installation is complete, the Install Complete dialog box opens (see "Install Complete dialog box" (page 18)).

#### Install Complete dialog box



18 Click **Done** to exit the installation.

> Device Manager is now completely installed on your machine. For instructions on starting the Device Manager software, see Chapter 2.

#### End—

#### Installing Device Manager on Windows from the Web

Use this procedure to obtain the Device Manager software from the Nortel web site.

#### **Procedure steps**

#### **Action** Step 1 Go to the following URL: http://www.nortel.com/support 2 In the Documentation, Software and Bulletins category, click Network Management. 3 In the Switches & Routers category, click Java Device Manager. Click Software. 4 5 In the Software category, click Releases.

A page listing available versions of the software opens.

- 6 Click the Java Device Manager version for the release you want.
- 7 Select Java Device Manager for MS-Windows.
  - A File Download dialog box opens, asking you to either run this program from its current location or to download the Device Manager software to your system.
- 8 Choose the directory to which you want to download the software. The software download is a self-extracting .exe file.
  - Note that in the file name, xxxx represents the current version of the Device Manager software.
- 9 Close all programs.
- 10 Navigate to the directory on your system where you downloaded the Device Manager software.
- 11 Double-click the jdm\_xxxx.exe file.

An installation screen opens, followed by a Nortel dialog box. Then, the Introduction dialog box appears. Go to "Introduction dialog box" (page 14) and complete steps 7 through 18.



## **Installing Device Manager on UNIX**

#### **ATTENTION**

Device Manager installation procedures are now standardized across all platforms. In addition, the required Java Runtime Environment (JRE) (version 1.6.0) is now part of the Device Manager installation package and does not require a separate installation. The bundled JRE will be used with Device Manager only and should not affect other Java applications on the same system. For Solaris, certain Operating System (OS) patches are required for Device Manager and JRE to function properly. Consult Sun Microsystems to install the appropriate OS patches before launching Device Manager.

#### **Navigation**

- "Installing Device Manager in a UNIX environment" (page 20)
- "Installing Device Manager on Linux from the CD" (page 20)
- "Installing Device Manager on Solaris from the CD" (page 20)
- "Installing Device Manager on UNIX from the Web" (page 21)

"Executing the Device Manager installation software on UNIX" (page 22)

#### **Installing Device Manager in a UNIX environment**

Installing the Device Manager software in a UNIX environment includes:

- 1. Uninstalling the previous version of Device Manager
- Installing the Device Manager software

The minimum system requirements for installing Device Manager on a PC running the Linux Kernel 2.2 (or later) operating system are as follows:

- 4 MB available in a temporary directory
- 400 MB free in the directory where you want to install the Device Manager software
- 512 MB DRAM

The minimum system requirements for installing Device Manager on a UNIX SPARC workstation running the Sun Solaris 8, 9, or 10 operating system are as follows:

- 4 MB available in a temporary directory
- 400 MB free in the directory where you want to install the Device Manager software
- 512 MB DRAM

#### Installing Device Manager on Linux from the CD

Use this procedure to install the Device Manager software to a Linux environment from the CD.

#### **Procedure steps**

Step	Action	
1	Navigate to the Linux/JDM subdirectory on the software CD.	
2	Refer to steps 3 to 14 in "Executing the Device Manager installation software on UNIX" (page 22) for the remaining instructions on how to install the Device Manager software in a UNIX environment.	
—End—		

#### Installing Device Manager on Solaris from the CD

Use this procedure to install the Device Manager software to a Solaris environment from the CD.

#### **Procedure steps**

#### Step **Action**

- Navigate to the Solaris/JDM subdirectory on the software CD.
- 2 Refer to steps 3 to 14 in "Executing the Device Manager installation software on UNIX" (page 22) for the remaining instructions on how to install the Device Manager software in a UNIX environment.

#### -End-

#### **Installing Device Manager on UNIX from the Web**

Use this procedure to install the Device Manager software to an UNIX (Linux or Solaris) environment from the Web.

#### **Procedure steps**

Step	Action	
1	Go to the following URL:	
	http://www.nortel.com/support	
2	In the Documentation, Software and Bulletins category, click Network Management.	
3	In the Switches & Routers category, click Java Device Manager.	
4	Click Software.	
5	In the Software category, click Releases.  A page listing available versions of the software opens.	
6	Click the Java Device Manager version for the release you want.	
7	Select Java Device Manager for either Sun Solaris Systems or Linux Systems, depending on what you want to install.	
	A File Download dialog box opens, asking you to either run this program from its current location or to download the Device Manager software to your system.	
8	Choose a directory to which you want to download the software.	
9	See "Executing the Device Manager installation software on UNIX" (page 22) for the remaining instructions on how to install the Device Manager software in a UNIX environment.	
—End—		

If several warning messages are displayed after you launch Device Manager on a Solaris workstation, do the following:

- Add the following statement to your .cshrc file: setenv XKEYSYMDB \$HOME/ .XKeysymDB
- Make sure there is a .XKeysymbDB file in your home directory.

#### **Executing the Device Manager installation software on UNIX**

Use this procedure to execute the Device Manager installation software in a UNIX environment.

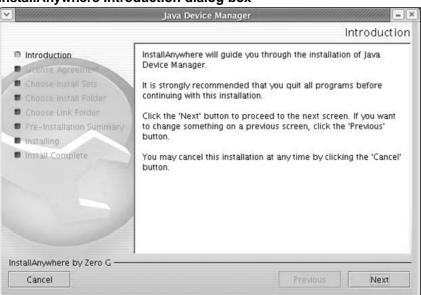
#### **Procedure steps**

Step	Action		
1	Close all programs.		
2	Navigate to the directory on your system where you loaded the Device Manager software.		
3	For the Linux environment, make the file executable by entering: chmod a+x jdm_ xxxx_linux.sh		
	For the Solaris environment, make the file executable by entering: chmod a+x dm_xxxx_solaris_sparc.bin		

4 For the Linux environment, run the jdm xxxx linux.sh file.

For the Solaris environment, run the dm xxxx solaris sparc.bin file.

An installation screen, followed by a Nortel dialog box opens. Then, the Introduction dialog box appears (see "InstallAnywhere Introduction dialog box" (page 23)).

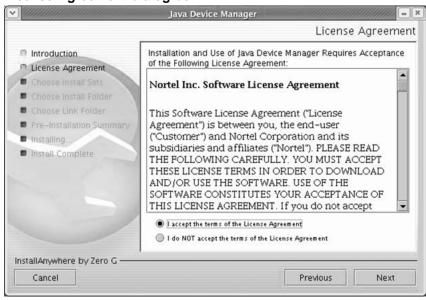


InstallAnywhere Introduction dialog box

5 Click **Next** to continue the installation process.

> The License Agreement dialog box opens (see "License Agreement dialog box" (page 23)).

#### License Agreement dialog box



- 6 Click I accept the terms of the License Agreement (see "License Agreement dialog box" (page 23)).
- 7 Click Next.

The Choose Install Sets dialog box opens (see "Choose Install Sets dialog box" (page 24)).

#### Choose Install Sets dialog box



#### 8 Do one of the following:

- Select Typical installation to install the common set features, as well as online Help.
- Select Minimal installation to select minimal features to install (recommended for those with limited disk space).
- Select Help to install only the online Help.
- Select Custom installation to customize the features prior to installation.

#### 9 Click Next.

The Choose Install Folder dialog box opens (see "Choose Install Folder dialog box" (page 25)).

#### Choose Install Folder □ Introduction Where Would You Like to Install? License Agreement /root/JDM Choose Install Sets Restore Default Folder Choose. Choose Install Folder Choose Link Folder Pre-Installation Summary Installing. ■ Install Complete InstallAnywhere by Zero G -Cancel Previous Next

#### Choose Install Folder dialog box

- 10 Click Restore Default Folder or click Choose to select the storage path.
- 11 Click Next.

The Pre-Installation Summary dialog box opens (see "Pre-installation Summary dialog box" (page 25)).





- 12 Verify the folder and disk space required to install the software. Use the Previous button to return to the appropriate dialog box to make changes.
- 13 Click Install.

The installation process begins (see "Installing Java Device Manager dialog box" (page 26)).

#### **Installing Java Device Manager dialog box**



When the installation is complete, the Install Complete dialog box opens (see "Install Complete dialog box" (page 27)).

#### Install Complete dialog box



14 Click **Done** to exit the installation.

Device Manager is now completely installed on your machine.

-End-

Installing	Device	Manager	software
			Continuo

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# **Starting Device Manager**

This chapter describes the basic procedures for starting the Device Manager.

#### **Navigation**

- "Setting the IP address" (page 29)
- "Starting Device Manager using Windows and UNIX" (page 29)
- "Setting the Device Manager properties" (page 31)
- "Opening a device" (page 36)

#### **Setting the IP address**

Before you can manage a switch or service unit using Device Manager, you must set an IP address using the Command Line Interface (CLI):

- For information on setting the Metro Ethernet Routing Switch 8600 IP address, see Nortel Metro Ethernet Routing Switch 8600 Commissioning (NN46220-309).
- For information on setting the ESU 1800 or 1850 IP address, see Nortel Metro Ethernet Services Unit 1800 and 1850 Commissioning (NN46212-303).

## Starting Device Manager using Windows and UNIX

To start Device Manager, do one of the following:

- In the Windows environment, from the Windows Start menu, choose
   Programs > Nortel > Java Device Manager > DM.
- In a UNIX environment, verify that the Device Manager installation directory is in your search path, then type:

JDM

An abbreviated Device Manager window opens, as shown in "Abbreviated Device Manager window" (page 30).

#### ATTENTION

On startup, Device Manager performs a DNS lookup for the machine on which it is running. If the DNS lookup is slow or fails, a timeout message appears.

#### **Abbreviated Device Manager window**



#### Replicating editable fields in Device Manager

Use this procedure to replicate all editable table cells.

#### **Procedure steps**

#### **Action** Step

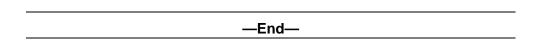
1 Click the cell.

> The cell is highlighted. (Note: A double-click makes the cell editor available. The cell editor allows you to directly update the value, open an option item list or open a dialog. If required, update the cell prior to highlighting it to be copied.)

- 2 Click the Copy icon.
- 3 Highlight the cell or cells in which you want to copy the data.
- Click the Paste icon.

The content in the first cell is replicated into the highlighted cells.

5 Click **Apply** to set the change or click the Arrow icon to reset the change.



#### **Setting the Device Manager properties**

Device Manager uses the Simple Network Management Protocol (SNMP) to configure and manage the Optical Ethernet Services Solution (OESS) switches. You can use the Device Manager Properties dialog box to configure important communication parameters such as the polling interval, timeout, and retry count. You can set these parameters at any time before or after you open a device.

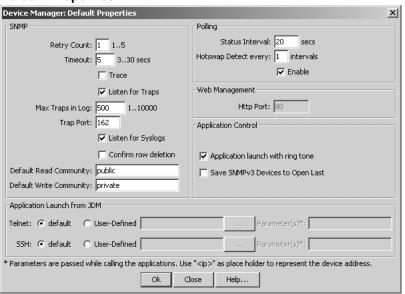
Device Manager keeps a set of default, or global, properties that apply to all devices, and a set of properties for each device. The default properties are used when you open a device for the first time. A copy of the properties are saved for each device that is opened. You can customize the properties for a particular device as required.

Use this procedure to set the Device Manager default properties.

#### **Procedure steps**

Step	Action
1	If you do not have a device open, from the Device Manager menu bar, choose <b>Device &gt; Properties &gt; Current</b> .
	OR
	If you have a device open, from the Device Manager menu bar, choose <b>Device &gt; Properties &gt; Devices</b> . Select <b>Default</b> in the Properties Device List box, and then click <b>Edit</b> .
	The Default Properties dialog box opens (see the following figure).

#### **Default Properties**



- 2 Select the properties you want to change and set their values. For information about the property fields, see "Variable definitions" (page 32).
- 3 Click Ok.

#### Variable definitions

Variable	Value
Status Interval	Interval at which statistics and status information are gathered (default is 20 seconds).
Hotswap Detect every	The number of intervals at which Device Manager will check for module hot swaps.
Enable	If selected, Device Manager will poll the switch according to the settings listed above the Enable check box.
Retry Count	If Device Manager cannot transmit polling information at startup, the number of times Device Manager retransmits polling information.

Timeout	Length of each retry of each polling waiting period. When accessing the device through a slow link, you may want to increase the timeout interval and then change the Retransmission Strategy to superlinear.
Trace	If selected, you can perform trace routes.
Listen for Traps	If selected, Device Manager will listen for a trap. When you operate Device Manager from a UNIX platform, you must be logged in as root in order to receive traps.
	By default, traps are sent in SNMP V2c format. However, if you are using an older network management system (NMS) that supports only SNMP V1 traps (HP OpenView), you can select that the traps be sent in V1 format.
	The management station operating with Device Manager is automatically added to the device trap receiver table.
Max Traps in Log	The maximum number of traps that can exist in the trap log. The default is 500.
Trap Port	The number of the port that trap messages are captured on. The default port for trap messages is 162.
Listen for Syslogs	If selected, Device Manager will listen for syslogs.
Confirm row deletion	If selected, Device Manager will send a message when a system table row is deleted.
Default Read Community	The default Read Community type. You can edit this field by highlighting the current value and typing over it.
Default Write Community	The default Write Community type. You can edit this field by highlighting the current value and typing over it.
Http Port	The default port used for web interface. This property cannot be changed for this dialog box.

Application launch with ring tone	When checked, the ring tone will sound every time you launch Device Manager. This is the default behavior.
Save SNMPv3 Devices to Open Last	When checked, you can open a device using Device > Open Last by SNMPv3 without reentering the required SNMPv3 authentication information. Note, however, that this is not secure. JDM prompts with a warning message that indicates a possible security threat because the devise opens without having to enter security information. When this box is unchecked, the saved SNMPv3 authentication information for all devices is erased. JDM prompts you to verify the change.
	JDM resets the required parameters for the devices open using SNMPv3 only when this option is enabled. In this case, you can select a device from a list of devices that Device Manager has accessed through SNMPv3 without having to enter the required SNMPv3 user name, authentication protocol/password, and privacy protocol/password again.
Telnet	By default, Device Manager uses the Telnet that comes with the operating system. To specify a different Telnet, click <b>User-Defined</b> and specify the path. Specify any parameters in the <b>Parameter(s)</b> box.
SSH	By default, Device Manager uses the SSH that comes with the operating system. To specify a different SSH, click <b>User-Defined</b> and specify the path. Specify any parameters in the <b>Parameter(s)</b> box.

#### Viewing and customizing per device properties

Use this procedure to view and customize the per device property settings.

#### **Procedure steps**

#### Step **Action**

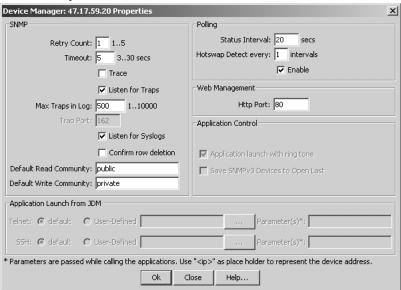
1 If you have a device open, from the Device Manager menu bar, choose **Device > Properties > Current**.

OR

If you do not have a device open, from the Device Manager menu bar, choose **Device > Properties > Devices**. Select the device IP address in the Properties Device List box, and then click Edit.

The properties dialog box for the selected device opens (see the following figure).

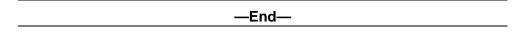
#### **Device Properties**



Select the properties you want to change and set their values. 2

> For information about the device properties field descriptions, see "Variable definitions" (page 35)

Settings that are gray are global default settings; you can only view them.



#### Variable definitions

Variable	Value
Retry Count	If Device Manager cannot transmit polling information at startup, the number of times Device Manager retransmits polling information.

Timeout	Length of each retry of each polling waiting period. When accessing the device through a slow link, you may want to increase the timeout interval and then change the Retransmission Strategy to superlinear.
Trace	If selected, you can perform trace routes.
Listen for Traps	If selected, Device Manager will listen for a trap. When you operate Device Manager from a UNIX platform, you must be logged in as root in order to receive traps.
	By default, traps are sent in SNMP V2c format. However, if you are using an older network management system (NMS) that supports only SNMP V1 traps (HP OpenView), you can select that the traps be sent in V1 format.
	The management station operating with Device Manager is automatically added to the device trap receiver table.
Max Traps in Log	The maximum number of traps that can exist in the trap log. The default is 500.
Listen for Syslogs	If selected, Device Manager will listen for syslogs.
Default Read Community	The default Read Community type. You can edit this field by highlighting the current value and typing over it.
Default Write Community	The default Write Community type. You can edit this field by highlighting the current value and typing over it.
Http Port	Specify the port to use for the web interface. To access the device home page with WEB UI, Http Port must be the same as the switch configuration.

## Opening a device

Opening a device displays the device view, a picture of the device. Before you can display the device view, you must enter community strings that determine the access level granted to the device. Use this procedure to open a device

### **Procedure steps**

### Step Action

1 From the abbreviated Device Manager window menu bar, choose Device > Open.

OR

From the Device Manager toolbar, click the Open Device button.



The Open Device dialog box opens (see the following figure).

### Open Device dialog box



For information, see "Variable definitions" (page 38).

- 2 In the **Device Name** field, identify the device by entering the DNS name or IP address of the device.
- 3 In the Read Community and Write Community fields, enter the proper community strings.

To gain read/write/all access to a device in Device Manager, you must enter the read/write/all community string for both the Read Community and Write Community strings. For information, see "SNMP community string default values" (page 38).

- Check the v3 Enabled checkbox to enable SNMP version 3. Clear 4 the checkbox to disabled SNMP version 3.
- 5 Click **Ping** to check if the switch is reachable, or click **Telnet** to initiate a Telnet session.

### Click Open. 6

End	
—Ellu—	

### Variable definitions

Variable	Value
Device Name	Enter the DNS name or IP address of the device.
Read Community	Enter the read community password string to use to open this device.
Write Community	Enter the write community password string to use to open this device.
Use default community string in properties	When selected, the community strings in the device specific properties are used to open this device. If the device specific properties do not exit, the global default properties will be used.
v3 Enabled	Enables (selected) or disables (cleared) SNMP version 3.
User Name	Indicates the user's security name. If v3 Enabled is selected, this name appears in the Edit > SnmpV3 tables.
Context Name	A string between 0 and 32 characters that identifies a context for accessing management information at a SNMP entity. Required for certain devices.
Authentication Protocol	Indicates the selected authentication protocol: NONE, MD5, or SHA-96.
Authentication Password	Indicates the authentication password string.
Privacy Protocol	Indicates the selected privacy protocol: NONE, DES, or AES.
Privacy Password	Indicates the privacy password string.

# SNMP community string default values

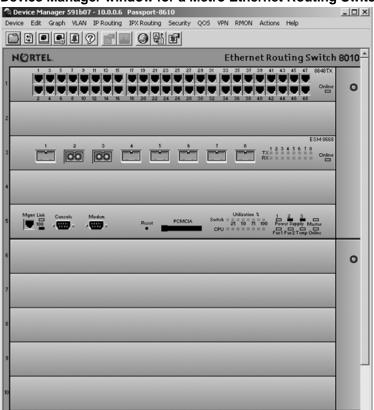
Access Level	Description
read-only	Public
Layer 1 read/write	Private
Layer 2 read/write	Private
Layer 3 read/write	Private
read/write	Private
read/write/all	Secret

### **Device view**

When a device is opened, Device Manager automatically determines what version of software the selected device is running; a picture of the device that represents its physical features appears.

"Device Manager window for a Metro Ethernet Routing Switch 8600 switch" (page 39) shows this window for the Metro Ethernet Routing Switch 8600, "Device Manager window for a Metro ESU 1800 switch" (page 40) shows it for the Metro ESU 1800, and "Device Manager window for a Metro ESU 1800 switch" (page 40) shows it for the Metro ESU 1850.

For information about connecting to the switch using SNMPv3, refer to Managing Network Operations (315545-E) and Configuring and Managing Security (314724-E).



Device Manager window for a Metro Ethernet Routing Switch 8600 switch

\*\*\*\*\*\*\*\*\*

### Device Manager window for a Metro ESU 1800 switch



### Device Manager window for a Metro ESU 1850 switch



### Opening a device using the Open Last option

Use this procedure to view or select a device from a list of available devices with the **Open Last** option in Device Manager.

### Procedure steps

### Step Action

From the abbreviated Device Manager window menu bar, choose 1 Device > Open Last.

A drop-down menu appears, listing the devices that were previously opened. The Open Last Device List displays up to 24 devices at a time. You can view additional devices by selecting Device List 1, Device List 2, and so forth.

2 Choose the IP address or system name of the device that you want to open. The Open Device dialog box for that device opens.

If you are not able to open a device in Device Manager, see "Switch fails to open in Device Manager" (page 76) for information about how to troubleshoot the problem.

—End—

To delete devices from the Open Last Device List, choose **Device > Open Last > Edit**. The Devices dialog box opens. Highlight the device that you want to remove from the list and click Delete.

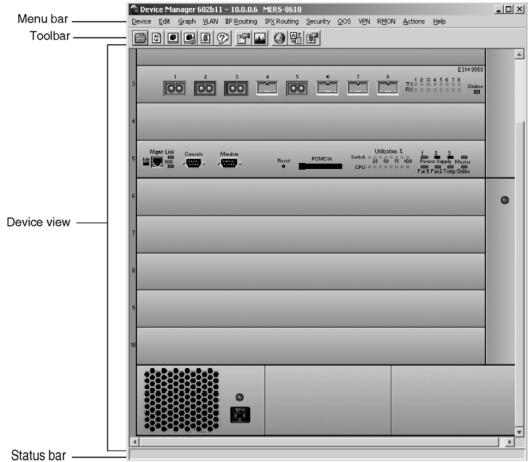
# **Understanding the Device Manager** window

The Device Manager window has the following four parts:

- menu bar
- toolbar
- · device view
- status bar

The graphic that follows (see "Parts of the Device Manager window" (page 42)) displays the parts of the Device Manager window for the Metro Ethernet Routing Switch 8600. The Metro ESU 1800 and Metro ESU 1850 are organized in a similar manner.

### Parts of the Device Manager window



# **Navigation**

- "Using the menu bar" (page 42)
- "Using the toolbar" (page 45)
- "Using the device view" (page 47)
- "Using the status bar" (page 52)
- "Using Device Manager dialog boxes" (page 53)
- "Online Help" (page 55)

# Using the menu bar

The menu bar on the Device Manager window (see "Menu bar" (page 43)) provides menus with commands that let you monitor the Metro Ethernet Routing Switch 8600, Metro ESU 1800, and Metro ESU 1850.

Menu	bar												
			N	letro Ethe	rnet Rou	uting Sw	itch 86	00					
<u>D</u> evice	<u>E</u> dit	<u>G</u> raph	<u>V</u> LAN I	P <u>R</u> outing If	P <u>X</u> Routing	<u>S</u> ecurity	QOS	V <u>P</u> N R	MON Act	ions <u>H</u> elp	P _		
			N	/letro ESU	1800								
Device	Edit	Graph	IP VLAN	IP Routing	Layer2	Packet Cla	assificatio	on QOS	Rmon	Rapid Pin	g Actions	Help	
			Ν	letro ESU	1850								
Device	Edit	Graph	IP VLAN	IP Routing	Layer2	QinQ I	Packet C	lassificat	tion QOS	Rmon	Rapid Ping	Actions	Help

### Menu bar descriptions

"Device Manager menu bar descriptions, Metro Ethernet Routing Switch 8600" (page 43) describes the menu bar fields for the Metro Ethernet Routing Switch 8600.

## Device Manager menu bar descriptions, Metro Ethernet Routing Switch 8600

Menu	Description
Device	The Device menu lets you open a device, refresh the device view, and set polling and SNMP properties. This menu also allows you to initiate a Telnet session, or open and view the Trap Log, Sys Log, and Log.
Edit	The Edit menu lets you view parameters for the chassis or for selected objects. The object can be a card, fan, MDA, port, power supply, or any other object. This menu also lets you run diagnostic tests, configure Asynchronous Transfer Mode (ATM), NTP, and SNMPv3 parameters, view the status of a controlled software upgrade, and select all objects in the device.
Graph	The Graph menu lets you view Device Manager statistics and produce graphs of the chassis, WSM card, or port statistics.
VLAN	The VLAN menu lets you view information about VLANs, spanning tree groups (STG), MultiLink Trunking/Link Aggregation Control Protocol (MLT/LACP), MAC Learning, Split MultiLink Trunking (SMLT), stacked VLANs (SVLAN), and Simple Loop Prevention Policy (SLPP).
IP Routing	The IP Routing menu lets you set up IP routing functions for the switch, including Open Shortest Path First (OSPF), Routing Information Protocol (RIP), Border Gateway Protocol (BGP), Virtual Redundancy Router Protocol (VRRP), Multicast, Internet Group Membership Protocol (IGMP), Distance Vector Multicast Routing Protocol (DVMRP), Protocol Independent Multicast (PIM), Pragmatic General Multicast Protocol (PGM), DHCP, Routed Split MultiLink Trunking (RSMLT), UDP forwarding, filters, and policies. (See Note 1.)

Menu	Description
IPX Routing	The IPX Routing menu lets you set up IPX routing functions, including RIP, Service Access Protocol (SAP), and policies. (See Note 2.)
Security	The Security menu lets you set security parameters for the various control and data paths.
VPN	The VPN menu lets you set up PBB, PBT and OLE2 services as well as your PBT trunks, Continuity Fault Management (CFM), and Transparent Domain Continuity (TDC); configure UNIs, Customer IP VLANs, and Transparent Domain Identifers (TDI); and configure Performance Monitoring (PM) profiles and view PM connection metrics.
QOS	The QOS menu lets you set up and view Quality of Service (QoS) profiles, and traffic management. This menu also lets you configure QoS policies, subport queue sets, Weighted Random Early Detection (WRED) thresholds, and Drop Trap profiles. In addition, you can view the ingress, egress, and color maps, and policy statistics.
RMON	The RMON menu lets you set up remote monitoring (RMON) alarms and view the alarm log. This menu also allows you to enable or disable RMON history or statistics on all ports.
Actions	The Actions menu provides quick access to selected actions without going through other menus and submenus. Use this menu to open the Web management interface, to save run-time or boot configurations, get a PCAP file, or revert back to previous configurations.
Help	The Help menu lets you view online Help topics for Device Manager. This menu also provides a legend for the port colors in the device view.
	GP, Multicast, DVMRP, PIM, and PGM routing functions are not en High Availability is enabled.
Note 2: IPX R	outing is not supported when High Availability is enabled.

"Device Manager menu bar descriptions, Metro ESU 1800 and 1850" (page

# 44) describes the menu bar fields for the Metro ESU 1800 and 1850. Device Manager menu bar descriptions, Metro ESU 1800 and 1850

Menu	Description
Device	The Device menu lets you open a device, refresh the device view, and set polling and SNMP properties. This menu also allows you to initiate a Telnet session and open and view the Trap Log and Log.

Menu	Description
Edit	The Edit menu lets you view parameters for the chassis or for selected objects, such as ports. This menu also lets you set security parameters, run diagnostic tests, and select all objects in the device.
Graph	The Graph menu lets you view chassis or port statistics.
IP VLAN	The IP VLAN menu lets you set up VLANS for the switch.
IP Routing	The IP Routing menu lets you set up IP routing and Quality of Service (QoS) functions for the switch. It also allows you to perform traffic control.
Layer 2	The Layer 2 menu lets you set up FDB, GVRP, Internet Group Membership Protocol (IGMP), Multicast FDB, port mirroring, Spanning Tree, and current and static VLANs for Layer 2 mode. The device must be reset for Layer 2 for this menu to function.
QinQ	The Q-in-Q menu lets you set up a VLAN for Q-in-Q mode (applies to the ESU 1850 only).
Packet Classification	The Packet Classification menu lets you perform filtering, metering, packet classification, and packet policing.
Rmon	The RMON menu lets you set up and view remote monitoring (RMON) alarms.
Rapid Ping	The Rapid Ping menu lets you test traffic data issues such as connectivity, latency, and packet loss.
Actions	The Actions menu provides quick access to selected actions without going through other menus and submenus. Use this menu to open the Web management interface and save runtime configurations.
Help	The Help menu lets you view online Help topics for Device Manager. This menu also provides a legend for the port colors in the device view.

# Using the toolbar

The toolbar buttons provide quick access to commonly used commands and some additional actions for the Metro Ethernet Routing Switch 8600, Metro ESU 1800, and Metro ESU 1850.

describes the toolbar buttons for the Metro Ethernet Routing Switch 8600, and Metro ESU 1800 and 1850.

### **Toolbar buttons**

Button	Name	Description	Menu equivalent
	Open Device	Opens a device.	Device > Open
\$	Refresh Device Status	Refreshes the device view information.	Device > Refresh Status
	Telnet	Opens a Telnet session.	Device > Telnet
	SSH Connection	Opens an SSH session.	Device > SSH
	Trap Log	Opens the trap log.	Device > Trap Log
?	Help	Opens online Help in a web browser window.	Help > Device Manager Basics
	Edit Selected	Displays configuration	Edit > Chassis
		data windows for the selected chassis object.	Edit > WSM Card
		oolootou oriadolo objecti	Edit > SAM Card
			Edit > Card
			Edit > Fan
			Edit > MDA
			Edit > Mgmt Port
			Edit > Port
			Edit > Power Supply
			Edit > Serial Port
Graph Selected		Opens statistics and graphing windows.	Graph > Chassis
			Graph > Port
0	Open Home Page	Opens the Web management interface home page.	Actions > Open Home Page
A.C.	Save Runtime Config	Saves the current run-time configuration.	Actions > Save Runtime Config
	Alarm Manager	Opens the RMON Alarm Manager window.	Rmon > Alarm Manager

## Using the device view

The device view allows you to determine at a glance the operating status of the various modules and ports in your hardware configuration. You also use the device view to perform management tasks on specific objects.

# **Navigation**

- "Selecting objects" (page 47)
- "Interpreting the status of LEDs and ports" (page 49)
- "Using shortcut menus" (page 50)

### Selecting objects

In the device view, you can select the following types of objects for the Metro Ethernet Routing Switch 8600, and Metro ESU 1800 and 1850:

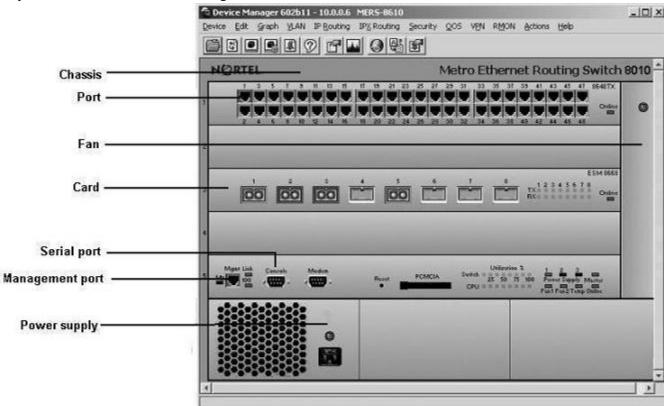
- the entire chassis
- a card (module) or multiple cards
- a port or multiple ports
- a console port (Metro ESU 1800 and 1850 only)
- a Media Dependent Adapter (MDA) (Metro ESU 1850 only)

For the Metro Ethernet Routing Switch 8600, you can also select the following types of objects:

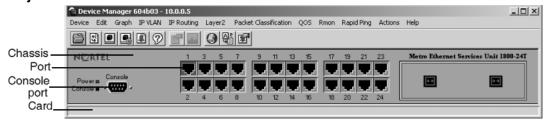
- a serial port
- a power supply
- a fan
- a management port

"Objects in a Metro Ethernet Routing Switch 8600 device view" (page 48) shows these objects in a Metro Ethernet Routing Switch 8600, "Objects in a Metro ESU 1800 switch device view" (page 48) shows them in the Metro ESU 1800, "Objects in a Metro ESU 1850 switch device view" (page 49) shows them in the Metro ESU 1850.

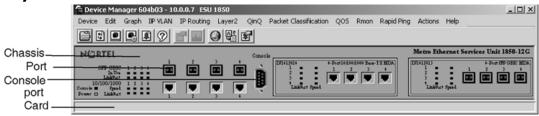
### Objects in a Metro Ethernet Routing Switch 8600 device view



### Objects in a Metro ESU 1800 switch device view



### Objects in a Metro ESU 1850 switch device view



To select a single object, click the edge of the object. The object is outlined in yellow, indicating that it is selected. Subsequent activities in Device Manager refer to the selected object.

To select multiple objects of the same type (such as ports or modules), use one of the following actions:

- For a block of contiguous ports or modules, drag to select the group of objects.
- For multiple ports or modules anywhere in the switch chassis, press **Ctrl** and click the objects anywhere in the device view.

The general rule for selecting multiple physical objects, such as fans, power supplies, modules, and ports, is that the selected objects must belong to the same category or have some kind of parent/child relationship.

### Interpreting the status of LEDs and ports

The conventions on the device view are similar to the actual switch appearance for the Metro Ethernet Routing Switch 8600, and Metro ESU 1800 and 1850. Module LEDs are in one of three states: on, off, or blinking. For a full description of what each state means, refer to the documentation that came with the module.

The ports on the device view are color-coded to provide at-a-glance port status. "Device Manager port color codes" (page 49) shows the status assigned to each color.

### **Device Manager port color codes**

Color	Description
Green	Port is up and operating.
Red	Port has been manually disabled.
Orange	Port has no link.
Light Blue	Port is in standby mode.
Dark Blue	Port is being tested.
Grey	Port is not reachable by Device Manager.
Pink	Port has a loopback connector connected to it.

In addition, the Help menu provides a legend that identifies the port colors and their meanings.

### **Using shortcut menus**

Objects in the device view, such as the chassis, ports, and cards, have shortcut menus. These menus provide a faster path for editing objects and applying changes; however, you can access the same options through the menu bar or the toolbar.

To display the chassis shortcut menu, select the chassis (see "Chassis shortcut menu" (page 50)) and right click.

### Chassis shortcut menu

Metro Ethernet Routing Switch 8600



Nortel Metro ESU 1800 and 1850

Chassis
Edit
Graph
Save Config
Reset Counters
Factory Reset
System Restart

For more information, see "Chassis shortcut menu options" (page 50).

### Chassis shortcut menu options

"Chassis shortcut menu options, Metro Ethernet Routing Switch 8600" (page 50) describes the chassis shortcut menu options for the Metro Ethernet Routing Switch 8600.

### Chassis shortcut menu options, Metro Ethernet Routing Switch 8600

Option	Description
Edit	Edit chassis parameters.
Graph	Graph chassis statistics.
Save Runtime Config	Save any changes made as a run-time configuration.
Save Boot Config	Save any changes made as a boot configuration.
Reset Counters	Reset all the statistics counters for the switch.
Hard Reset	Perform a hard reset of the switch.
Soft Reset	Perform a soft reset of the switch.

"Chassis shortcut menu options, Metro ESU 1800 and 1850" (page 51) describes the shortcut menu options for the Metro ESU 1800 and 1850.

### Chassis shortcut menu options, Metro ESU 1800 and 1850

Option	Description
Edit	Edit chassis parameters.
Graph	Graph chassis statistics.
Save Config	Save any changes made to the configuration.
Reset Counters	Reset all the statistics counters for the switch.
Factory Reset	Does not boot the switch. Instead, it returns the configuration to factory defaults.
System Reset	Performs a system restart.

To display the port shortcut menu (see "Port shortcut menu" (page 51)), select one or more ports and right-click.

### Port shortcut menu

Metro ESU 1800 and 1850

Port 10/3 Edit Graph Enable Disable

Metro Ethernet Routing Switch 8600

Port 1/	25
Edit	
Graph	
Enable	
Disable	
Enable I	Rmon Stats
Enable I	Rmon History
Enable I	FastStart
Disable	FastStart

### Port shortcut menu options

"Port shortcut menu options, Metro ESU 1800 and 1850" (page 51) describes the I/O port shortcut menu options for the Metro ESU 1800 and 1850.

### Port shortcut menu options, Metro ESU 1800 and 1850

Option	Description
Edit	Display edit port menu.
Graph	Graph port statistics.
Enable	Administratively bring a port up.
Disable	Administratively shut down a port.

"Port shortcut menu options, Metro Ethernet Routing Switch 8600" (page 52) describes the I/O port shortcut menu options for the Metro Ethernet Routing Switch 8600.

### Port shortcut menu options, Metro Ethernet Routing Switch 8600

Option	Description
Edit	Display edit port menu.
Graph	Graph port statistics.
Graph POS	Display on POS ports only.
Enable	Administratively bring a port up.
Disable	Administratively shut down a port.
Enable Rmon Stats	Enable Rmon statistics logging on this port or ports. Does not display on ATM or POS ports.
Enable Rmon History	Enable Rmon history logging on this port or ports. This field does not display on ATM or POS ports.
Enable FastStart	Enable FastStart spanning tree operation on this port or ports. This field does not display on ATM ports.
Disable FastStart	Disable FastStart spanning tree operation on this port or ports. This field does not display on ATM ports.

For the Metro Ethernet Routing Switch 8600, the card shortcut menu provides a quick way to view a card's parameters. When the selected card is an I/O module, you can click on the Edit option on the shortcut menu to open the Edit Card dialog box.

To display the card shortcut menu (see "Card shortcut menu (I/O module)" (page 52)), select a card and right-click.

### Card shortcut menu (I/O module)



# Using the status bar

At the bottom of the Device Manager window is the status bar. This area displays error and informational messages from the software application. These messages are not related to the device being managed.

# **Using Device Manager dialog boxes**

Many Device Manager dialog boxes contain fields that allow you to enter values for parameters, and many of the parameters have predetermined possible values. For example, a port may be set to be enabled or disabled. Other parameter values are ranges of user-determined values. For example, the value for a system contact will be a name you enter in the SysContact field.

Fields that can be modified are displayed in white.

Use this procedure to change the value in a field.

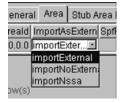
### **Procedure steps**

### Step Action

1 Click the field.

> The possible choices for that parameter are displayed. "Parameter selection menu" (page 53) shows an example of a Metro Ethernet Routing Switch 8600 field that can be modified.

### Parameter selection menu



- 2 Click a new value from the list.
- 3 Click **Apply**.

-End-

For fields that do not have preset values, click the field and type the value.

### **Using the buttons in Device Manager dialog boxes**

"Device Manager buttons" (page 54) describes buttons that appear in Device Manager dialog boxes and tabs.

Note that all of these buttons do not appear in all of the dialog boxes on the Metro Ethernet Routing Switch 8600, Metro ESU 1800, and Metro ESU 1850. Specifically, only the first ten buttons listed in the table, with the exception of Resize Columns, are applicable to the Metro ESU 1800 and 1850.

### **Device Manager buttons**

Button	Description
Apply	Applies the changes you have entered in fields on a tab or dialog box. The button is dimmed until you change a parameter. Changes are displayed as <b>bold</b> text or numbers.
Insert	Opens a dialog box to create a new entry for a table; then from the dialog box, inserts the new entry in the table.
Delete	Deletes a selected entry.
Refresh	Refreshes the information in the window. Every time you click on Refresh, new information is polled from the switch and displayed.
Close	Closes the tab or dialog box and disregards any changes you have made to fields.
Help	Opens context-sensitive online Help.
Resize Columns	Resizes table columns to fit the data in them.
Stop	Stops the current action (polling).
Сору	Copies selected items to your computer's memory clipboard.
Paste	Pastes the contents of your computer's clipboard.
Reset changes	Resets any configuration values you have changed back to their original value.
Export data	Allows you to copy data to external media.
Print Table	Prints the contents of any table that is displayed.
Graph	Graphs selected data.
Export (on Graph dialog boxes)	Saves the current table in ASCII format in a file you specify. The table contains tabs so you can then import this file into a text editor or spreadsheet for further analysis.
Print (on Graph dialog boxes)	Prints the current table.

### **Editing objects**

You can edit objects and values from Device Manager in the following ways:

- Select an object; from the Device Manager toolbar click **Edit Selected**. The edit dialog box opens for that object.
- From the shortcut menu for a chassis, card, port, or any other object, choose Edit.

The edit dialog box opens for that object.

Double-click an object.

The edit dialog box opens for that object.

From the Device Manager menu bar, choose **Edit > Selected All** . Then choose an object type from the list.

When you change values in a field, you can see fields that have been changed but not applied. Click **Apply** to apply the changes to the device.

Most tabs and dialog boxes contain a Refresh button. After you apply changes to fields, click **Refresh** to display the new information in the tab or dialog box. In Windows and UNIX environments, the changed value is displayed in **bold** text.

To make changes in the running configuration, click **Apply**. Changes are not applied to Device Manager until you click Apply. To make the changes permanent, click **Actions > Save Runtime Config** from the Device Manager menu bar.

# **Online Help**

Online Help in Device Manager is context-sensitive. You use a web browser to display online Help. The web browser should launch automatically when you click help. To display online Help correctly, Nortel recommends using the following web browsers:

- Microsoft Internet Explorer 5.0 or later
- Netscape Navigator 4.7 or later

In a UNIX environment, for Device Manager (or Optivity Switch Manager) to launch a Netscape browser properly, the shell in which Device Manager was launched must have a Netscape browser in its path.

In a Solaris environment, Device Manager may not open a Netscape window when you click a Help button. To work around this issue, first launch Netscape manually; then the Help system properly opens in the Netscape browser window.

The Help menu may behave erratically after you view the "About Device Manager" selection. If the edge of the Help menu extends beyond the device view window, you may not be able to select Legend using the cursor. The workaround for this problem is to use the arrow keys to select from this menu or to widen the device view window so that the Help menu is displayed in its entirety on top of the device view.

If, for some reason, the web browser does not launch, the Help files for the Metro Ethernet Routing Switch 8600 are located in the default installation directories listed in "Help file locations, Metro Ethernet Routing Switch 8600" (page 56).

### Help file locations, Metro Ethernet Routing Switch 8600

Help files	Default path	
Device Manager	Jdm/help/dm	
Device-specific Help	default install directory/help	

"Help file locations, Metro ESU 1800 and 1850" (page 56) provides the location of the Help files for the Metro ESU 1800 and 1850.

### Help file locations, Metro ESU 1800 and 1850

Help files	Default path
Device Manager	default install directory/help/pp8k_basics
Device-specific Help	default install directory/help/ <device> <version></version></device>
	where:
	<device> is the device name; for example accelar2k</device>
	<pre><version> is the software version number; for example v331</version></pre>
	Thus, the default path for device-specific Help for the accelar2k device, version 331 is /help/accelar2k/v331.

# Managing the system

This chapter describes how to manage the switch system using the Device Manager software.

# **Navigation**

- "Managing files on the Metro Ethernet Routing Switch 8600" (page 57)
- "Managing files on the Metro ESU 1800" (page 61)
- "Managing files on the Metro ESU 1850" (page 64)
- "Viewing controlled software upgrade status" (page 70)
- "Viewing trap logs" (page 71)

# Managing files on the Metro Ethernet Routing Switch 8600

On the Metro Ethernet Routing Switch 8600, the File System tabs allow you to perform the following tasks:

- Copy a file.
- Check the amount of memory used and the number of files stored in onboard flash memory and an installed PCMCIA card.
- Verify the name, size, and storage date of each file present in onboard flash memory and PCMCIA memory.

These tasks are described in the subsections that follow.

# **Navigation**

- "Copying files" (page 57)
- "Checking flash memory use" (page 59)
- "Viewing file names on the Flash" (page 59)
- "Viewing file names on the PCMCIA" (page 60)

### Copying files

Use this procedure to copy a file.

### **Procedure steps**

### Step Action

1 From the menu bar, choose **Edit > File System**.

> The File System dialog box opens with the Copy File tab displayed (see "Copy File tab" (page 58)).

### Copy File tab



- 2 In the **Source** text box, specify the file to be copied in one of these forms:
  - /flash/filename
  - /pcmcia/filename
  - ipaddress:/home/user/filename
- In the **Destination** text box, specify the location where you want to 3 copy the file in one of these forms:
  - /flash/filename
  - /pcmcia/filename
  - ipaddress:/home/user/filename

For example, to copy a configuration file to a remote TFTP server, the Destination text box might read:

10.10.40.20:/home/joe/config.cfg

and the Source text box might read:

/flash/config.cfg

- In the Action field, select start. 4
- 5 Click **Apply** to start copying the files.

The results appears in the Result field.

### -End—

### Checking flash memory use

Use this procedure to check use of the flash memory.

### **Procedure steps**

### Step **Action**

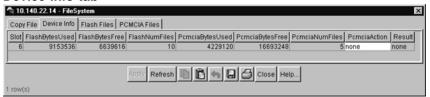
1 From the menu bar, choose **Edit > File System**.

> The File System dialog box opens with the Copy File tab displayed (see "Copy File tab" (page 58)).

2 Click the **Device Info** tab.

The Device Info tab appears (see "Device Info tab" (page 59)).

### **Device Info tab**



The Device Info tab shows the amount of memory used and available for both onboard flash memory and an installed PCMCIA card, as well as the number of files in each location. The Action field allows you to reset the PCMCIA card.

### End—

### Viewing file names on the Flash

Use this procedure to view the names and sizes of switch files.

### **Procedure steps**

### Step Action

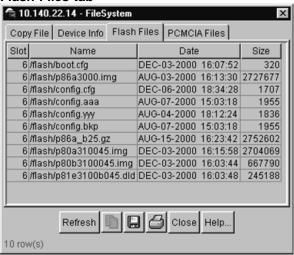
1 From the menu bar, choose **Edit > File System**.

> The File System dialog box opens with the Copy File tab displayed (see "Copy File tab" (page 58)).

2 Click the Flash Files tab

The Flash Files tab appears (see "Flash Files tab" (page 60)).

### Flash Files tab



The Flash Files tab lists the name, modification date, and size of each switch file in the onboard flash memory. The slot number indicates the chassis location of the referenced CPU/switch fabric module.



### Viewing file names on the PCMCIA

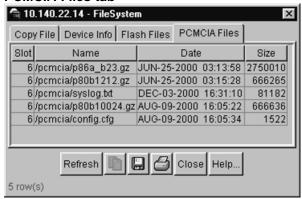
Use this procedure to view the names and sizes of switch files.

### **Procedure steps**

### Step **Action**

- 1 From the menu bar, choose **Edit > File System**.
  - The File System dialog box opens with the Copy File tab displayed (see "Copy File tab" (page 58)).
- 2 Click the **PCMCIA Files** tab.
  - The PCMCIA Files tab appears (see "PCMCIA Files tab" (page 61)).

### PCMCIA Files tab



The PCMCIA Files tab lists the name, modification date, and size of each switch file in the PCMCIA card. The slot number indicates the chassis location of the referenced CPU/switch fabric module.



# Managing files on the Metro ESU 1800

On the Metro ESU 1800, the File System tabs allow you to download firmware, upload and download configuration files, and view the history log.

# **Navigation**

- "Downloading firmware" (page 61)
- "Uploading and downloading configuration files" (page 62)
- "Viewing the history log" (page 63)

### **Downloading firmware**

Use this procedure to download the firmware.

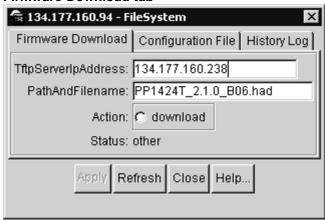
### **Procedure steps**

### Step **Action**

1 From the menu bar, choose **Edit > File System**.

> The FileSystem dialog box opens with the Firmware Download tab displayed (see "Firmware Download tab" (page 62)).

### Firmware Download tab



- 2 In the TftpServerlpAddress text box, specify the IP address of the TFTP server.
- 3 In the PathAndFilename text box, specify the location from which you want to obtain the firmware.
- In the **Action** field, click **download**.
- 5 Click **Apply** to start downloading the firmware. Note that after the firmware is downloaded, the switch will reboot.

—End—

### Uploading and downloading configuration files

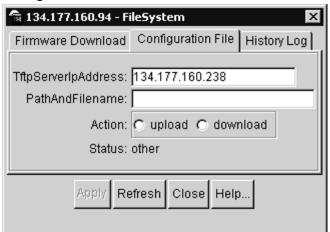
Use this procedure to upload or download configuration files.

### Procedure steps

### Step Action

- 1 From the menu bar, choose **Edit > File System**.
  - The FileSystem dialog box opens with the Firmware Download tab displayed (see "Firmware Download tab" (page 62)).
- 2 Click the **Configuration File** tab.
  - The Configuration File tab appears (see "Configuration File tab" (page 63)).

### Configuration File tab



- 3 In the TftpServerlpAddress text box, specify the IP address of the TFTP server.
- In the PathAndFilename text box, specify the location from where 4 you want to obtain the configuration file.
- 5 In the **Action** field, click **upload** or **download**.
- 6 Click **Apply** to start uploading or downloading the firmware.



### Viewing the history log

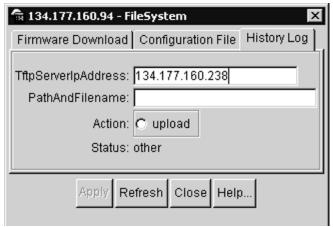
Use this procedure to upload the Metro ESU 1800 switch's history log.

### **Procedure steps**

### Step Action

- 1 From the menu bar, choose **Edit > File System**.
  - The FileSystem dialog box opens with the Firmware Download tab displayed (see "Firmware Download tab" (page 62)).
- 2 Click the **History Log** tab
  - The History Log tab appears (see "History Log tab" (page 64)).

### History Log tab



- 3 In the TftpServerlpAddress text box, specify the IP address of the TFTP server.
- 4 In the **PathAndFilename** text box, specify the location to which you want to upload the history log.
- 5 In the Action field, click upload.
- 6 Click **Apply** to upload the history log to the tftpserver.

-End-

# Managing files on the Metro ESU 1850

This section describes how to set up and edit your Metro ESU 1850 switch ports.

You can use the Trivial File Transfer Protocol (TFTP) utility to upgrade the switch firmware by transferring a new firmware image file from a TFTP server to the switch. You can also use the TFTP server to load a configuration file into the switch, save switch settings to the TFTP server, and upload a history log from the switch to the TFTP server.

### **Navigation**

- "Downloading firmware from the server" (page 65)
- "Creating firmware" (page 66)
- "Booting firmware" (page 67)
- "Uploading and downloading configuration settings to the server" (page 68)

"Saving a history log to the server" (page 69)

### Downloading firmware from the server

Use this procedure to download a firmware file from the TFTP server.

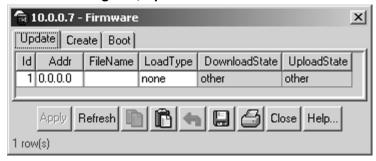
### **Procedure steps**

### Step Action

1 From the Device Manager menu bar, choose Edit > File System > Firmware.

The Firmware dialog box opens with the Update tab displayed (see "Firmware dialog box, Update tab" (page 65)).

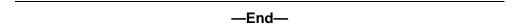
### Firmware dialog box, Update tab



For information, see "Firmware dialog box, Update tab fields" (page 65).

- 2 Enter values for Addr, Filename, and LoadType.
- 3 Click **Apply** to save the configuration.

The ESU 1850 automatically reboots after the firmware download completes. During the reboot, Device Manager connectivity is temporarily lost.



# Firmware dialog box, Update tab fields

Field	Description
ld	The identifier.
Addr	The configured IP address of the TFTP server.

Field	Description
Filename	Configures the DOS path and filename of the firmware on the TFTP server.
LoadType	Sets the system to download mode. When this field is selected, the Apply button becomes active. The options are:
	none (default)
	upload
	download

### **Creating firmware**

Flash permits multiple firmware images to be stored on the ESU 1850. Nortel recommends maintaining no more than three stored images on the ESU 1850 flash. If more than three images exist, use Update to download the firmware or delete one of the existing files before using Create.

Use this procedure to create a firmware file.

### **Procedure steps**

### Step Action

1 From the Device Manager menu bar, choose Edit > File System > Firmware.

The Firmware dialog box opens with the Update tab displayed.

2 Click the Create tab.

> The Create tab appears (see "Firmware dialog box, Create tab" (page 66)).

### Firmware dialog box, Create tab



For information, see "Firmware dialog box, Create tab fields" (page 67).

3 Enter values for Addr, Filename, and LoadType. 4 Click **Apply** to save the configuration.



### Firmware dialog box, Create tab fields

Field	Description
FileName	Specifies the path and filename of the firmware file.
Addr	Specifies the IP address where the new firmware file is located.
Ctrl	The valid values are:
	none The specified firmware file is not downloaded.
	download Downloads the specified firmware file

### **Booting firmware**

Use this procedure to boot a firmware file.

### **Procedure steps**

### Step **Action**

1 From the Device Manager menu bar, choose **Edit > File System > Firmware** 

The Firmware dialog box opens with the Update tab displayed.

2 Click the **Boot** tab.

> The Firmware dialog box Boot tab appears (see "Firmware dialog box, Boot tab" (page 67)).

### Firmware dialog box, Boot tab



For information, see "Firmware dialog box, Boot tab fields" (page 68).

- 3 Click **Apply** to save the configuration.
- 4 Reboot the device.



### Firmware dialog box, Boot tab fields

Field	Description
Index	Specifies the table index for the file entry.
Dscr	Describes the version of the software file.
Ctrl	The valid values are:
	bootup Identifies the default file to use for bootup.
	nonactive This file is not used for bootup.
	delete Deletes the file.
	The setting takes affect when the system is restarted.

### Uploading and downloading configuration settings to the server

Use this procedure to update a configuration file from the TFTP server.

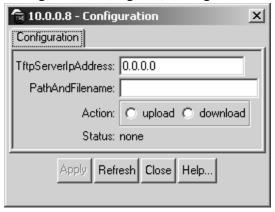
### **Procedure steps**

### **Action** Step

From the Device Manager menu bar, choose Edit > File System > Configuration.

The Configuration tab opens (see "Configuration dialog box, Configuration File tab" (page 68)).

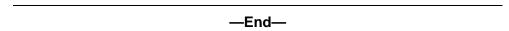
### Configuration dialog box, Configuration File tab



For information, see "Configuration dialog box, Configuration tab fields" (page 69).

2 Enter the **TftpServerlpAddress** and **PathAndFilename**.

- 3 Select upload or download.
- 4 Click Apply.



### Configuration dialog box, Configuration tab fields

Field	Description
TftpServerlpAddress	Configures the IP address of the TPTP server.
PathAndFilename	Configures the DOS path and filename of the switch configuration file on the TFTP server.
Action	Sets the system to upload (to upload a file) or download (to download a file) mode. When the appropriate field is selected, the Apply button becomes active. Click Apply to initiate the file transfer.
Status	Read-only field that indicates the status of the file transfer.

# Saving a history log to the server

Use this procedure to save a history log to the TFTP server.

### **Procedure steps**

### Step **Action**

1 From the Device Manager menu bar, choose **Edit > File System** > HistoryLog.

The HistoryLog dialog box opens with the HistoryLog tab displayed (see "HistoryLog dialog box, History Log tab" (page 69)).

### HistoryLog dialog box, History Log tab



For information, see "HistoryLog dialog box, History Log tab fields" (page 70).

- 2 Enter the **TftpServerlpAddress** and **PathAndFilename**.
- 3 Select upload to save a history log.
- 4 Click **Apply** to save the configuration.

—End—
-------

### HistoryLog dialog box, History Log tab fields

Field	Description		
TftpServerlpAddress	Configures the IP address of the TPTP server.		
PathAndFilename	Configures the DOS path and filename of the history log file on the TFTP server.		
Action	Sets the system to upload mode. When the field is selected, the Apply button becomes active. Click Apply to initiate the file transfer.		
Status	Read-only field that indicates the status of the file transfer.		

# Viewing controlled software upgrade status

Use this procedure to view the status of an automatic controlled software upgrade on the Metro Ethernet Routing Switch 8600.

### **Procedure steps**

Step	Action						
1	From the Device Manager menu, select <b>Edit &gt; Chassis</b> .  The chassis dialog box appears with the System tab displayed.						
2	Select the <b>CSU Status</b> tab.  A list of the upgrade status for all of the ESM 8668 and R modules in the chassis is displayed, with the start and end times of each upgrade.						
	The CSU status information is only displayed during a controlled software upgrade.						
	—End—						

# Viewing trap logs

Use this procedure to view the trap log to see what traps have been received.

On the Metro Ethernet Routing Switch 8600 and Metro ESU 1800 and 1850, you can configure the switch to send out SNMP generic traps (see "Setting the Device Manager properties" (page 31)). When Device Manager is running, any traps received are recorded in the trap log.

### **Procedure steps**

### Step Action

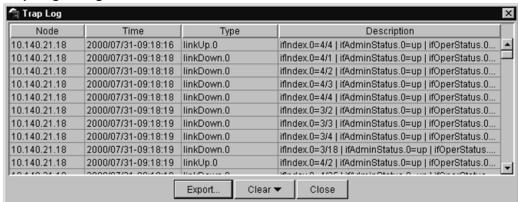
1 From the Device Manager toolbar, click the **Trap Log** button.



OR

From the Device Manager menu, choose **Device > Trap Log**. The Trap Log dialog box opens (see the following figure).

### Trap Log dialog box



-End

# Appendix A Operation Problems with Device Manager

This appendix contains information about problems that may occur while you are managing the Metro Ethernet Routing Switch 8600, Metro ESU 1800, or Metro ESU 1850.

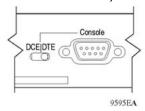
# **Navigation**

- "Login prompt fails to appear on the Metro Ethernet Routing Switch 8600" (page 73)
- "Login prompt fails to appear on the Metro ESU 1800 or 1850" (page 75)
- "Switch fails to open in Device Manager" (page 76)

# Login prompt fails to appear on the Metro Ethernet Routing Switch 8600

If you connect a terminal to the Console port on the Metro Ethernet Routing Switch 8600 and are unable to get a login prompt, the port may have an incorrect DCE/DTE setting. Try moving the DCE/DTE switch from its current setting to the other position (see "DCE/DTE switch, Metro Ethernet Routing Switch 8600" (page 73)).

### DCE/DTE switch, Metro Ethernet Routing Switch 8600



If the console screen still fails to show a prompt, use Device Manager to check the port settings.

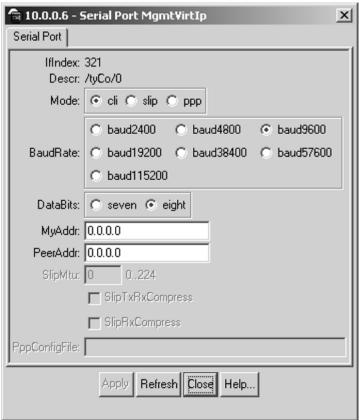
Use this procedure to check the Console port settings on the Metro Ethernet Routing Switch 8600.

### **Procedure steps**

## Step Action

- 1 In the device view, select the Console port.
- 2 From the Device Manager menu bar, choose Edit > Serial Port.
  The Serial Port tab displays (see "Serial Port tab" (page 74)).

### **Serial Port tab**



3 Check to see that the port settings are:

Mode: cli

BaudRate: baud9600

DataBits: eight

If necessary, change the port settings to match those in this list.

-End-

# Login prompt fails to appear on the Metro ESU 1800 or 1850

If you connect a terminal to the Console port on the Metro ESU 1800 (see "Console port on the Metro ESU 1800" (page 75)) or Metro ESU 1850 (see "Console port on the Metro ESU 1850" (page 75)) and are unable to obtain a login prompt, use Device Manager to check the port settings.

### Console port on the Metro ESU 1800



### Console port on the Metro ESU 1850



Use this procedure to check the Console port settings.

### **Procedure steps**

### Step Action

- In the device view, select the Console port.
- 2 From the Device Manager menu bar, choose **Edit > Console**.

The Serial Port tab displays. "Serial Port tab on the Metro ESU 1800 and 1850" (page 76) shows the Serial Port tab for the ESU 1800 and 1850.

# 😭 192.32.96.108 - Serial Port Serial Port C other C baudRate-2400 € baudRate-9600 BaudRateConfig: C baudRate-19200 C baudRate-38400 C baudRate-57200 C baudRate-115200 SerialPortDataBits: 8 SerialPortParityBits: none SerialPortStopBits: 1 Rs232PortConfig: console cout-of-band StatusConsoleInUse: not-in-use AutoLogoutConfig: C never C autoLogout-2mins C autoLogout-5mins autoLogout-10mins C autoLogout-15mins Apply Refresh Close Help...

### Serial Port tab on the Metro ESU 1800 and 1850

- 3 Check to see that the port settings are:
  - baudRate-9600
  - SerialPortDataBits: 8
  - SerialPortParityBits: None
  - SerialPortStopBits: 1
  - rs232PortConfig: console

If necessary, change the port settings to match those in this list.

—End—

# Switch fails to open in Device Manager

If a switch does not open, Device Manager displays a timeout message. Timeouts can occur in slower networks and indicate that you need to increase your retransmission retries and timeout interval. For information about setting these values, refer to "Setting the Device Manager properties" (page 31).

If increasing the retransmission retries and timeout interval does not solve the problem, in the Open Device dialog box, make sure that you entered the correct read and write community information. For instructions on entering community strings, see "Opening a device" (page 36).

If the switch cannot be reached through IP (the management station cannot communicate with the switch), verify the following:

Is the switch connected to the network?

- Is the switch turned on?
- Does the switch have an incorrect IP address?
- Is the incorrect IP address specified in the Open Device field in Java Device Manager?
- Is the network misconfigured?

If you are using SNMPv3, verify the following:

- Is the encryption module correctly loaded on the switch?
- Is the user login and password correct?
- Is the authentication protocol and password correct?
- Is the privacy protocol and password correct?

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### Nortel Metro Ethernet Routing Switch 8600

# Fundamentals — Using Device Manager

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